

L 34767-66

ACC NR: AP6026280

SOURCE CODE: CZ/0037/65/000/004/0340/0347

AUTHOR: Gorbor, Richard; Vilim, Frantisek; Zavota, KarelORG: Institute of Solid State Physics, CSAV, Prague (Ústav fyziky pevných látek CSAV)TITLE: Low temperature measurements with a carbon thermometerSOURCE: Coskoslovensky casopis pro fysiku, no. 4, 1965, 340-347TOPIC TAGS: thermometer, temperature measurement, carbon resistor

ABSTRACT: The paper discusses the choice of method for measuring temperatures in a range of roughly 2-90°K. The region of applicability and the accuracy in determination of the temperature with a carbon thermometer are found by evaluating the results of measurements of the temperature dependence of the carbon resistor. The authors thank Doctor A. Linek, UFPL, for help in preparing the program and for his advice with the calculations. Orig. art. has: 3 figures and 5 formulas. [Based on authors Eng. abst.] [JPRS]

SUB CODE: 14, 09 / SUBM DATE: 12 Dec64 / SOV REF: 001 / OTH REF: 011

Card 1/1 11/15

VILIM, F.

CZECHOSLOVAKIA/Magnetism - Ferrites and Ferrimagnetism

F-6

Abs Jour : Ref Zhur - Fizika, No 1, 1959, No 1096

Author : Krupicka Svatopluk, Vilim Frantisek  
Inst : Institute of Technical Physics, Czechoslovak Academy of  
Sciences, Prague, Czechoslovakia  
Title : Richter-Type Magnetic Aftereffect in Manganese Ferrite.

Orig Pub : Chekhosl. fiz. zh., 1957, 7, No 6, 723-728

Abstract : A study was made of magnetic relaxation in specimens of non-stoichiometric manganese ferrites by measuring the temperature dependence of the magnetic susceptibility and the loss angle at frequencies of 50, 100, and 200 kcs. The high values of the activation energy and the absence of a pronounced dependence on the defect or excess of oxygen in the ferrite indicate that the exchange of electrons between two and three valent ions of iron cannot be the main cause for the observed aftereffect. A hypothesis is advanced that the observed aftereffect is determined essentially by the

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CZECHOSLOVAKIA/Magnetism - Ferrites and Ferromagnetism

F-6

Abs Jour : Ref Zhur - Fizika, No 1, 1959, No 1096

electron exchange between the manganese ions of different valence. This hypothesis is in agreement with the experiment on the study of acoustical resonance in  $Mn_3O_4$ .  
Ye.Z. Mazel'

Card : 2/2

Z/037/60/000/006/002/010  
E073/E535

AUTHORS:

Gerber, Richard and Vilím, František  
Apparatus for Rapid Measurement of the Curie Point of  
Ferrites

TITLE:

PERIODICAL: Československý časopis pro fysiku, 1960, No. 6,  
pp. 521-525

TEXT: Of various published methods the authors consider only the method described by Tatochenko and Lyndin (Zavodskaya lab., Vol. 23, 1957, p. 61) and Tul'chinskiy (Ibid, Vol. 26, 1960, p. 232) appropriate. They apply the initial susceptibility for determining the Curie temperature. In view of the high specific resistance of ferrites, this method is particularly suitable for measurements by means of an a.c. field. The method can be easily automated and the sensitivity remains sufficiently high. The Curie point is determined on the basis of the temperature dependence of the initial a.c. susceptibility, the magnitude of which is measured from the change of the inductance of the sensing coil inside which the specimen is located. The measurement is based on the equation

$$\chi_o^*(T_c) = A\chi_o^*_{\max}$$

Card 1/3

Z/037/60/000/006/002/010  
E073/E535

Apparatus for Rapid Measurement of the Curie Point of Ferrites where  $\chi_o^*(T_c)$  is the apparent initial susceptibility at the Curie point, A is a constant which practically equals 1, and  $\chi_o^*$  max is the apparent maximum susceptibility. The temperature determined by means of this method is somewhat higher than the real Curie point temperature. However, the magnitude of the error is favourably influenced by the sharp drop of the initial susceptibility near the Curie point. In deriving the above equation, the author refers to another paper of his which is still to be published. The block schematics of the arrangement is given. As an a.c. source a 75 kc/s crystal oscillator is used. The signal from the oscillator is fed to a symmetrical resonance bridge, one branch of which consists of the inductance (sensing coil) in series with a variable capacitance, whilst the other branch contains a variable resistance. From the centre branch the signal is picked up inductively and fed to the input of an amplifier with an overall amplification of 1300. The furnace consists of two coaxial ceramic tubes, whereby the internal tube carries two layers of a bifilar platinum wire. The anode circuit of the first

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Card 2/3

Z/037/60/000/006/002/010  
E073/E535

Apparatus for Rapid Measurement of the Curie Point of ferrites amplifier tube contains an LC loop; the output stage is a cathode follower and the output voltage is fed onto an oscillograph and also into a selenium amplifier in bridge (Graetz) connection. The rectified signal is then fed into a multi-channel recorder. Simultaneously, the furnace temperature, measured by a calibrated thermocouple, is also recorded. The specimens used are 8 mm dia., 15 mm long. The Curie point temperatures measured in the case of rising temperature differ from those measured in the case of falling temperature and, therefore, the arithmetic mean of the two is taken. The apparatus is suitable for temperatures up to 600°C. The measured accuracy is estimated at  $\pm 1.3^\circ\text{C}$ . The temperature range can be extended by using glass insulated sensing coils. As an example, the curves obtained on a manganese-zinc ferrite with excess manganese is reproduced. Acknowledgments are made to K. Závěta, physicist and Engineer Dušek for useful discussions and also to E. Burda for his comments. There are 3 figures and 5 references; 2 Soviet, 1 Czech and 2 French.

ASSOCIATION: Ústav technické fysiky ČSAV, Praha (Institute of Technical Physics, ČSAV, Prague)

SUBMITTED: April 16, 1960.  
Card 3/3

Richter-type magnetic after-effect in manganese ferrite. Syntopluk Krupička and František Vilim (Czechoslov. Acad. Sci., Prague). *Czechoslov. J. Phys. T*, 723-8 (1957) (in English).—Nonstoichiometric Mn-ferrites are investigated as to a magnetic after-effect of the Richter type, the samples differing in their Mn excess and in oxygen content. The results for 11 samples are tabulated. Temp. dependence of loss-tangent at 50, 100, and 200 kilocycles/sec. is represented in a curve for one sample, and its permeability (real part) *vs.* temp. in another curve for the same frequencies. The measurements disclose the presence of a strong magnetic Richter-type after-effect in Mn ferrites, and especially the values found for the activation energies indicate that Mn ions contribute to the mechanism of relaxation. Manfred Mannheimer

Distr: 4E2c/4E3d

APPROVED FOR RELEASE: 09/01/2001

**CIA-RDP86-00513R001859820001-7"**

CZECHOSLOVAKIA/Magnetism - Ferrites and Ferrimagnetism.

Abs Jour : Ref Zhur - Fizika, No 6, 1959, 13250

Author : Krupicka, Svatopluk; Vilim, Frantisek

Inst :

Title : Magnetic Viscosity of the Richter Type in Manganese-Ferrite.

Orig Pub : Ceskosl. casop. fys., 1957, 7, No 6, 694-698

Abstract : See Referat Zhur Fizika, 1959, No 1, 1096.

Card 1/1

- 74 -

VIKIM F

CZECHOSLOVAKIA

A New Method of Measuring the Susceptibility of Paramagnetic  
and Diamagnetic Substances

By J. VIKM. (From *Czechoslovak Journal of Physics*, Vol. 6, No. 1, January 1956, pp. 84-90, 3 illustrations.)

Source: ENGINEERS' DIGEST, Vol. 17, No. 4, 1956, pp 141-142

VILIM, F.

Technical Report  
Jointly  
by  
[redacted]

AC 172-14-62-318  
2278 - Destroyed 1948. Subject to a structural test at  
the U.S. M. M. Bureau, c. 1948. [redacted]  
Date 12. V. 1. 114-62-318 In Graph

The material which is based upon the determination  
of the Bureau. Due above failures in steel tubes,  
it was found due to structural faults in the material  
as well as those due to wall thinness.

SA

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u

536.062.74 : 621.317.422  
8018. A new method for the quick estimation of coercive force. J. Broz and  
I. Vilim. Cas Pest. Mat. Fis., 75 (No. 3) D307-D312 (1960) In Czech.  
An attempt to solve the problem of quick determination of the coercive  
force for current samples of ferrromagnetic materials. The method makes use  
of the uncompleted circuit of the investigated sample and the determination  
of the coercive force is performed by means of an a.c. magnetized circuit.  
By measuring the leakage flux produced by the sample and passing through  
the magnetic circuit the coercive force is determined. It is possible  
to determine the coercive force for samples of different cross-sections.

A.

ABE-LLA METALLURGICAL LITERATURE CLASSIFICATION

21.317-46 LIP(e) CS  
ACC-NR AP6011080

SOURCE CODE: CZ/0017/65/054/010/0486/0490

AUTHOR: Vilim, Jan (Engineer)

ORG: none

TITLE: Method of determining the dielectric constant, excluding the disturbances in the electrode zone and on the surface of the dielectric sample

SOURCE: Elektrotechnicky obzor, v. 54, no. 10, 1965, 486-490

TOPIC TAGS: dielectric constant, electrode, dielectric material, permittivity

## ABSTRACT:

The influence is demonstrated that the measuring electrodes and the roughness of the dielectric sample's surface have on the measured value of permittivity. These values may depend to a considerable extent on the thickness of the sample. As the thickness increases, the measured values are closer to the actual values of permittivity. This fact is used to determine the real value of permittivity, by extrapolating the dependence of the measured values for sample thicknesses increasing to infinity. The author thanks Mr. M. Koudelkova of the Electrotechnology Faculty of SVST in Bratislava for assistance with the measurements and participation in the research. Orig art. has: 6 figures and 12 formulas. [JPRS]

SUB CODE: 20, 09 / SUBM DATE: 07Jul62 / ORIG REF: 005 / OTH REF: 002 / SOV REF: 002

UDC: 621.317.335.3

Card 1/1 JC

LIBICH, V., inz. CSc.; VILLM, J., inz.

Steam washing equipment for boilers with natural water circulation.  
Strojirenstvi 14 no.6:411-417 Je '64.

1. Research Institute of Electric Equipment, First Brno Machine  
Factory, Zavody Klementa Gottwalda, Brno.

VILIM, J., inz.

Measuring the medium temperature by means of a clockwork. Jemna mechanika opt 6 no. 9:285-286 S '61.

1. Slovenska vysoka skola technicka, katedra elektrotechnologie,  
Bratislava.

VILIM, Jan, ins.

Method of determining the complex dielectric constant by  
eliminating the influence of interfering phenomena on the border  
of the dielectric specimen. El tech sas 14 no.6:368-373 '63.

1. Odborny asistent, Katedra elekrotechnologie, Slovenska  
vysoka skola technicka, Bratislava, Mytna ul. 32/e.

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7

VILIM, Jiri, inz.

Solubility of salts, especially of silicon dioxide in saturated  
steam. Energetika Čz ll no.1:13-18 Ja '61.

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7"

VILIM, J., AND OTHERS

Universal electric-mine locomotive with germanium rectifier. p.363

ELETROTECHNICKY OBZOR. (Ministerstvo tezkeho strojirenstvi a Ceskoslovenske  
vedecka technicka spolecnost pro eletrotechniku pri Ceskoslovenske adademii  
ved) Praha, Czechoslovakia  
Vol.48, no.7, July 1959

Monthly List of East European Accessions (EEAI) LC, Vol.8, no.11

Nov. 1959

Uncl.

S/194/62/000/009/018/100  
D201/D308

AUTHORS: Vilim, Jan and Zvolánek, František

TITLE: A time relay

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika,  
no. 9, 1962, abstract 9-2-35 b (Czech. pat., cl. 21c,  
44, no. 97831, December 15, 1960)

TEXT: An a.c. relay circuit, providing for control of the drop-out time is patented. The circuit is characterized by a condenser connected in series or in parallel to the winding of the energized relay, forming a resonant circuit, which in its turn is connected in series with a variable resistor. The resonant circuit is shunted by a thermistor in series with a second variable resistor. The resistors are used for controlling the drop-out time of the relay.  
2 figures. / Abstracter's note: Complete translation. 7

Card 1/1

VILIM,

5(4)

PHASE I BOOK EXPLOITATION

CZECH/2501

Hála, Eduard, Jiri Pick, Vojtech Fried, and Otakar Vilim

Rovnováha kapalina--pára (Liquid--Vapor Equilibrium) Praha, Nakladatelství  
Československé Akademie Věd, 1955. 321 p. (Series: Československá Akademie věd.  
Studie a prameny. Sekce chemická, sv. 10) Errata slip inserted. 38,600 copies  
printed.

Scientific Ed.: Jan Pinkava, Doctor, Engineer; Resp. Ed.: Jaroslav Vacha,  
Doctor.

Full English translation under the title Vapor-Liquid Equilibrium  
[Translator: G. Standart] published in 1958 by Pergamon Press Ltd.  
Library of Congress call number: TP156.E65R613.

Card 1/1

LIS/esp  
11-10-59

CZECHOSLOVAKIA/Atomic and Molecular Physics - Changes of Aggregate D  
State

Abs Jour : Ref Zhur Fizika, No 11, 1959, 24741

Author : Popelka, Jaroslav; Vilim, Otakar; Zampachova, Ljuba

Inst : -  
Title : Instrument for the Determination of the Equilibrium  
Between Liquid and Vapor at High Pressures.

Orig Pub : Chem. listy., 1959, 53, No 1, 22-23

Abstract : No abstract.

Card 1/1

15-10-67, 60  
CZECHOSLOVAKIA/ Physical Chemistry - Thermodynamics. B-8  
Thermochemistry. Equilibrium. Physicochemical Analysis.  
Phase Transitions.

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7446

Author : Pick, J., Fried, V., Hala, E., and Vilim, O.

Title : Vapor Pressure of Ethylene Glycol Monomethyl and Monoethyl Ethers

Orig Pub : Chem. listy, 1955, Vol 49, No 11, 1720-1721 (published in Czech); Sb. chekhsol. khim. rabot, 1956, Vol 21, No 1, 260-261 (published in German with a Russian summary)

Abstract : The dynamic method (RZhKhim, 1955, 13590) was used in measuring the vapor pressure ( $P$ ) of ethylene glycol monomethyl (I) and monoethyl (II) ether between 63 and 134°. The results are presented in a table. The constants for the interpolation equation have been determined as follows: for I  $\log P = 7.7085 - 1711.2/(t - 230)$ ; for II  $\log P = 7.8191 - 1801.9/(t - 230)$

Card 1/1

- 81 -

83842

Z/009/60/000/010/001/003

E073/E335

5.1210

AUTHORS: Vilím, Otakar and Řežábek, Antonín

TITLE: Contribution to the Simple Determination of the  
Temperature Dependence of the Viscosity of Fluids

PERIODICAL: Chemický průmysl, 1960, No. 10, pp. 533 - 534

TEXT: According to J.H. Perry (Ref. 3) the curves of the temperature dependence of the viscosity of various substances are very similar and therefore if, on the log  $\eta$  versus  $t$ ,  $t$  is not in degrees Centigrade but in terms of the temperature difference, a single curve is obtained for all substances. This method was verified at the Research Institute for Synthetic Rubber, n.p. Kauchuk in conversion calculations for various temperatures of data measured by means of rotameters and a considerable variance of the values was observed for various types of substances. On the basis of evaluation of the temperature dependence for about 20 substances it was found that the method could be made considerably more accurate if the temperature difference is plotted in reduced values. If at least two viscosity values at two temperatures are known, interpolation can be carried out on the basis of the equation:

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Card 1/4

83842

Z/009/60/000/010/001/003  
E073/E355**Contribution to the Simple Determination of the Temperature Dependence of the Viscosity of Fluids**

$$\log \eta = A + B/T \quad (1) .$$

To enable plotting a generalised curve the constants  $A$  and  $B$  were first calculated for Eq. (1), in which  $T$  is substituted by  $T_r$  for all the 20 substances under consideration.

By means of these constants, the derivations  $dT_r/d\log \eta$  were determined for equal viscosity values of these substances and the values averaged. It was found that the real values of the derivations for equal viscosities, which characterise the slope of the temperature-dependence curves, are very close for the various substances. The average derivations were plotted in a graph against  $\log \eta$ . The generalised curve was then plotted on the basis of graphical integration of the equation:

$$T_r = \left( \frac{dT_r}{d\log \eta} \right)_{\text{aver.}} d\log \eta + b \quad (2) .$$

Card 2/4

83842

Z/009/60/000/010/001/003  
E073/E335**Contribution to the Simple Determination of the Temperature Dependence of the Viscosity of Fluids**

The curve of this dependence is plotted in Fig. 1. To enable accurate plotting of this curve numerical data are entered in Table I for 20 substances. The method was then tested by calculating the viscosity values for temperatures about 40 °C higher than the temperature for which the viscosity was known. The thus calculated and experimentally determined results for  $\eta_2$  for 20 substances are entered in Table II, which also contains the values of the constants of Eq. (1) for the reduced temperature. As an example, the viscosity of ethylbromide at 77.8 °C is calculated from the known value at 30 °C (0.348 cP). The thus calculated viscosity at 77.8 °C is 0.253 cP as compared with the measured value of 0.250 cP.

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Card 3/4

83842

Z/009/60/000/010/001/003  
E073/E335

Contribution to the Simple Determination of the Temperature Dependence of the Viscosity of Fluids

There are 1 figure, 2 tables and 4 English references.

ASSOCIATION: Výzkumný ústav syntetického kaučuku, n.p. Kaučuk,  
Gottwaldov (Research Institute for Synthetic  
Rubber, n.p. Kaučuk, Gottwald)

Card 4/4

VILIP, O.; SZLAUR, J.

Liquid-vapour equilibrium. Pt. 32. Coll. Czech. chem. 29 no.8:1378-  
1382 Ag '64.

J. Research Institute of Synthetic Rubber, Gottwaldov.

Vilim, O.

2

CZECHOSLOVAKIA

SVOBODA, V; VILIM, O; KUBICEK, A.

Research Institute of Synthetic Rubber (Forschungsinstitut  
für synthetischen Kautschuk), Gottwaldov (for all)

Prague, Collection of Czechoslovak Chemical Communications,  
No 9, 1963, pp 2310-2316

"Dien-Polymerization with Complex Catalysts I. Examination  
of the Course of Polymerization in a Highly Viscous  
Medium and Washing the Catalyst in a Dilatometer."

<-VILIM, O.

Thermal conductivity of hydrocarbons. Coll Cz Chem 25 no.4:993-999  
Ap '60. (EEAI 9:12)

1. Research Institut of Synthetic Rubber, Gottwaldov  
(Hydrocarbons)

CZECHOSLOVAKIA/Thermodynamics. Thermochemistry. Equilibria. Physico- E-8  
Chemical Analysis. Phase Transitions.

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26107

Author : Eduard Hala, Vojtech Fried, Jiri Pick, Otokar Vilim

Title : Equilibrium Liquid - Vapor. XIV. Activity Factors and Physical Properties of Pure Components.

Orig Pub : Chem listy, 1956, 50, No 3, 343-348

Abstract : The authors proposed a new method of computation of the dependence of the activity factor on the composition of the liquid mixture. This method always permits to carry out the computation for a complete group of substances on the basis of the known behavior of standard binary systems and parachors of given components. Following relations were deducted basing on certain assumptions:  $A_{ik}^{0.5} = A_{ij}^{0.5} - KN_i(N_j - N_k) / (N_i N_k)$  and  $A_{ki}^{0.5} = A_{ji}^{0.5} - K' (N_j - N_k) / N_i$ , where  $A_{ij}$ ,  $A_{ik}$ ,  $A_{ji}$  and  $A_{ki}$  are constants of Van Laar equations of the 3rd order for binary systems ij and ik, and K and K' are constants which it is necessary to determine for the given group of binary mixtures. The magnitudes of  $N_i$ ,  $N_j$  and  $N_k$  are given by the relation  $N_i = (0.377 \sqrt{P_i} + 11.0)0.925$ , where  $\sqrt{P_i}$  is the parachor of the i-th component. See RZhKhim, 1956, 77532 for the report XIII.

Card : 1/1

VILIM, O.

Vilim, O., and others. Equilibrium of liquid vapor. XII. Fractional steam distillation of the o-nitroethylbenzene-p-nitroethylbenzen system. p. 1169. CHENICKA LISTY. Praha. Vol. 49, no. 8, Aug. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 11, Nov. 1955, Uncl.

Vapor pressures of ethylene glycol monomethyl and monoethyl ethers. I. PEE, V. MELA, E. HABA, and O. Vilim  
Wrocaw. Akad. Nauk. Chem.-technol., Prace Nauk. Chem. Listy 49,  
1720-1(1958).—The vapor pressures of ethylene glycol monomethyl (I) and monoethyl (II) ethers were detd. by the dynamic method. In the range 50–760 mm. Hg the results can be expressed by the equations: for I:  $\log P = 7.7085 - 1711.2/(T + 230)$ , and for II:  $\log P = 7.8191 - 1801.9/(T + 230)$ , with a max. error of  $\pm 1\%$ . The phys. consts. of I and II are: b.p. = 123.4° and 134.0°;  $n_D^2 = 1.4020$  and 1.4079;  $d_4^0 = 0.9649$  and 0.9301, resp.

E. Erdos

③ M 51

VILLM, Otakar

Distillation drying of liquids with limited water mixability.  
Chem prum 14 no.7:348-350 Jl '64.

l. Kaučuk National Enterprise, Research Institute of Synthetic  
Rubber, Kralupy nad Vltavou.

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7"

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7

William MAKAR

AMC Cancellation, Item, Committee 21, [redacted]

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7"

06609

CZECH/8-53-1-5/20

AUTHORS: Popelka, Jaroslav, Vilim, Otakar and Zampachova, Ljuba  
TITLE: Instrument for Determining the Liquid-vapour Equilibrium  
at Elevated Pressures

PERIODICAL: Chemické listy, 1959, Vol 53, Nr 1, pp 22 - 23

ABSTRACT: A static apparatus for measuring liquid-vapour equilibria at high pressures has been designed. The disturbance of the equilibrium conditions devising the sampling operation, which occurs in the usual type of bomb apparatus, is eliminated by subdividing the apparatus into two or three chambers which can be isolated by closing a double stop valve fitted on a single spindle, which prevents non-equilibrium evaporation. A sketch (line drawing) of the apparatus is shown in Figure 1. Acknowledgments are expressed to J. Šuba for assisting in the design of the instrument. There are 1 figure and 2 references, of which 1 is Czech and 1 English.

Card 1/2

Vilim, O

6

Vapor pressure of ethylene glycol monomethyl and mono-  
ethyl ethers. J. Pick, V. Friedl, L. Hoda, and O. Vilim.  
Collection Czechoslov. Chem. Commun., 21, 260-1 (1956) (in  
German). See C.I. 50, 6364.

E.J.C.

4

PM

COUNTRY : CZECHOSLOVAKIA  
CATEGORY : Laboratory Equipment. Apparatus, Their Theory,  
Construction and Application F  
ABS. JOUR. : RZKhim., No. 1 1960, No. 961  
  
AUTHOR : Popelka, J.; Vilim, O.; Zampachova, L.  
INST. :  
TITLE : Apparatus for Determination of Liquid-Vapor  
Equilibrium at High Pressures  
ORIG. PUB. : Chem. listy, 1959, 53, No 1, 22-23  
ABSTRACT : A device for the determination of liquid-vapor  
static equilibrium at high pressures is de-  
scribed. The errors caused by nonequiponderant  
evaporation of liquid when the selection of  
vapor phase samples is made, have been elimi-  
nated from the apparatus. The chamber of the  
apparatus is divided into three parts which,  
after equilibrium is attained, can be separa-  
ted by a valve so that the upper part will

CARD: 1/2

F-6

COUNTRY	:
CATEGORY	:
ABS. JOUR.	: RZKhim, No. 1 1960, No. 961
AUTHOR	:
INST.	:
TITLE	:
ORIG. PUB.	:
ABSTRACT cont'd	: contain only vapor, middle part a heterogeneous mixture, and the lower part only liquid. Acceleration of the attainment of equilibrium is effected by swinging the apparatus.-- M. Ryba

CARD: 2/2

Vilim O.

Chemical Abst.  
Vol. 48 No. 8  
Apr. 25, 1954  
General and Physical Chemistry

Liquid-vapor equilibria. IV. General equation relating the ratio of the activity coefficients to the composition of the liquid phase. Eduard Hala, Vojtech Fried, Jiri Pick, and Otakar Vilim (Vysoka Skola chem. Praha, Czech.), *Chem. Listy* 47, 127-80 (1953); cf. preceding abstr.—Expressions for the ratio of activity coeffs. in binary and ternary systems are derived from the Wolf 4-suffix empirical equation. By means of various simplifying assumptions these expressions are reduced to the equations of Scatchard-Hammett, Margules-Redlich-Kister, and to a sym. equation. V. Limiting values of the relative volatilities in two-component systems at high pressures. *Ibid.* 1281-4.—A rapid method is given for computing the limiting values of relative volatilities at high pressures, from isothermal total-pressure data. Generalized compressibility factors of gases and expansion factors of liquids can be used. The method reproduces the limiting volatilities of the system N<sub>2</sub>-O<sub>2</sub> up to 25 atm. with a max. error of 8%. VI. Calculation of liquid-vapor equilibria in two-component systems from isobaric *p-x* curves. Eduard Hala, Jiri Pick, Vojtech Fried, and Otakar Vilim, *Ibid.* 1417-22.—A differential equation for the relative volatilities is derived from thermodynamics. This equation can be solved numerically or graphically under various assumptions if the temp. dependence of the vapor pressures of the pure components and the b.p.-*vs.*-mole-fraction curve of the binary mixt. are known. For the system CCl<sub>4</sub>-Me<sub>2</sub>CO, calcd. results agree with exptl. data. VII. Calculation of liquid-vapor equilibria in two-component systems from isothermal *p-x* curves. Eduard Hala, Vojtech Fried, Jiri Pick, and Otakar Vilim, *Ibid.* 1423-7.—An analogous expression for the relative volatility is derived as in part VI, applicable to isothermal total pressure dependence on compn. of the liquid phase. Generalized compressibility factor of gases and expansion factor of liquids can be used. Application of the method to the system CHCl<sub>3</sub>-EtOH gives very good results. VIII. A new flow equilibrium still for the determination of liquid-vapor equilibria. Otakar Vilim, Eduard Hala, Vojtech Fried, and Jiri Pick, *Ibid.* 1693-7.—A new app. for the medium- and low-pressure ranges is described. One detn. takes 10-15 min. and requires 50-100 ml. of sample. Results obtained on H<sub>2</sub>O-AcOH and Me<sub>2</sub>CO-

CH  
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*EDWARD HÁLA*

cumene mixts. agree with the published data. With the cumene-PhOH system thermodynamically consistent data ( $\log(\gamma_1/\gamma_2)$  vs. mole fraction curve) were obtained. A modification of the Williams manostat (C.A. 41, 4633c) for higher pressures with precision up to 0.01 mm. Hg is described. IX. The system butanol-butyl methacrylate-butyl  $\alpha$ -hydroxyisobutyrate at low pressures. Jiri Pick,  
Vojtěch Fried, Edward Hála, and Otakar Vlček. *Ibid.*  
1750-7.—In the pressure range of 20–60 mm. Hg, the n.p.v.  
of the pure compds. and their binary mixts. were detd. and  
expressed by the Calingaert-Davis equation. From these  
data the compns. of the vapor phase at 60 mm. Hg in the 3  
binary systems were calcd. The compn. dependence of  
the activity coeff. in the ternary system was calcd. by  
means of the van Laar equation and expressed graphically.  
The phys. consts. are: Bu methacrylate  $n_D^{20} = 1.4241$ ,  
 $d_{4^{\circ}}^{20} = 0.8051$ ; Bu  $\alpha$ -hydroxyisobutyrate  $n_D^{20} = 1.4175$ ,  
 $d_{4^{\circ}}^{20} = 0.9506$ , b.p. = 185.00°. E. Erdős

*2/2*

VILIM 6.

7

- (3) S Liquid-vapor equilibrium. XIII. Phase equilibria in the system water-butanol-butyl acetate. J. H. Pick, Vojtěch Frýdl, Eduard Hilt, and Oskar Vilim (Vysoká škola chem.-technol., Praha). *Chem. Listy*, 49, 442-46 (1955); cf. C.A. 49, 7660. The liquid-liquid equil. in the ternary system  $H_2O$ - $BuOH$ - $AcOBu$  was detd. by the synethetic method; the temp. dependence of the equil. curve was obtained by graphic correlation. The tie-lines were detd. analytically. The vapor-liquid equil. in the homogeneous region of the ternary system was ruled by the 3-suffix van Laar equation; the ternary consts. were evaluated from 2 exptl. points detd. analytically. E. Erdős

7 5

An apparatus for the estimation of liquid-vapor equilibrium at high pressures. Jaroslav Popelka, Otakar Vilim, and Ljuba Žampachová (Výzkumný ústav synth. knofuku, Gottwaldov, Czech.). Chem. listy 53, 22-3(1959).—A static app. for measuring liquid-vapor equil. at high pressures was designed. The autoclave has 3 chambers sep'd. by a double stop valve and adapted for sampling, is surrounded by a heating jacket, and is fitted with 3 pivots for the rocking machine. M. Hudlický

VILIM OTAKAR

Liquid-liquid equilibria. XI. The system styrene-ethylbenzoic acid at 60°. Otakar Vilim, Eduard Hula, Jiří Přík, and Václav Fried. *Vestn. Českého chem. spol.*, Prague, 1961, **46**, 621-4.—The equil. compns. in the 3 binary systems and in the ternary system were detd. by means of a flow app. The data were correlated by means of the four-suffix Margules equation and corrected for the absorpt. of the HOAc in the vapor phase. A triangular equil. composition diagram.  
XII. Fractional steam distillation of the system *o*-nitroethylbenzene-*p*-nitroethylbenzene. Otakar Vilim, Eduard Hula, Václav Fried, and Jiří Přík. *Ibid.* 1109-13.—The vapor pressures of the pure *o*-nitroethylbenzene (I) and *p*-nitroethylbenzene (II) were detd. from 80° to 180° and expressed by the Calingaert-Davis equation (*C.A.* 20, 680); the consts. are: I:  $A = 7.8958$ ;  $B = 2280.0$ ; II:  $A = 7.9523$ ;  $B = 2317.0$ . The vapor-liquid equil. compns. in the I-II system at 100 mm. Hg and in the I-II-H<sub>2</sub>O system at 760 mm. Hg were detd. by means of a flow app. The I-II system behaves ideally. The measurement of a packed-column efficiency shows that the height equiv. to the theoretical plate is independent of the presence of an invisible liquid (H<sub>2</sub>O). R. Eridge

SVOBODA, V.; VILIM, O.; KUBICEK, A.

Diene polymerization with complex catalysts. Pt.1.  
Coll Cz Chem 28 no.9:2310-2317 S '63.

1. Forschungsinstitut fur synthetischen Kautschuk, Gottwaldov.

CZECH

Packings for laboratory fractionating columns made from glass textile. V. Hán, O. Vilim, J. Písek, and V. Frind (Vysoká škola chem.-technická, Prague). *Chem. Listy* 49, 359-400 (1955).—Three types of packings are described: (a) By the use of a helical screw from glass textile tube, a HETP of 1.8-2.5 cm. has been obtained. (b) In using "heligrid" type of packing from steel wire spiral, better contact with the walls and higher efficiency (HETP = 1.4 cm.) has been achieved by inserting suitably made disks from glass textile. (c) The efficiency of current packing is increased three-fold, if sept. by appropriately perforated glass textile disks.

E. Erdos

BT

VILIM, OTAKAR

CZECH

Liquid-vapor equilibria. VIII. A new flow equilibrium still for the determination of liquid-vapor equilibria. Otakar Vilim, Eduard Hala, Vojtěch Fried, and Jiří Pick. *Czechoslovak Chem. Commun.*, 19, 1330-4 (1954) (in German).—See C.A. 48, 4301d. R. J. C.

VILIM O.

CZECH

Liquid-vapor equilibria. V. Limiting values of the relative volatilities in two-component systems at high pressures. Eduard Hala, Vojtech Fried, Jiri Pick, and Otakar Vilim (Inst. Phys. Chem., Univ. Prague). *Collection Czechoslovak Chem. Commun.*, 19, 418-422 (1954) (in German). VI. Calculation of liquid-vapor equilibria in two-component systems from isobaric *t-x* curves. Eduard Hala, Jiri Pick, Vojtech Fried, and Otakar Vilim. *Ibid.* 417-27. VII. Calculation of liquid-vapor equilibria in two-component systems from isothermal *p-x* curves. Eduard Hala, Vojtech Fried, Jiri Pick, and Otakar Vilim. *Ibid.* 417-27. --See C.A. 48, 4301abc.  
E. I. C.

VILIM, O.  
Vapor pressures of butyl + hydroxybutyrate and of  
dibutyl ether. V. Fiala, J. Vlcek, R. Hora, and O. Vilim

(Vysoke učiliště chem. průmyslu, Praha 7 - Holešovice, 1774-81954) From solution of measurements of the temp.  
(T) and of  $\ln P$  of Bu<sub>2</sub>O was computed in the form:  $\ln \frac{P}{P_0} = A - B/(T - 43)$ , where for I:  $A = 7.9473$ ,  $B = 1711.9$  and  
for Bu<sub>2</sub>O:  $A = 7.4852$ ,  $B = 1711.6$ ; both in the range  
70-760 mm. Hg. The phys. constants found were: I b.p.  
185.0°, d<sub>40</sub><sup>20</sup> 0.95955, n<sub>D</sub><sup>20</sup> 1.4166; Bu<sub>2</sub>O b.p. 113.2°, d<sub>40</sub><sup>20</sup>  
0.76843, n<sub>D</sub><sup>20</sup> 1.3990.

[5] Erdmann

VILIM, O.

HALA, E.; FRIED, V.; PICK, J.; VILIM, O.

Equilibrium in the system liquid -- vapor. Part.4. General equation for the dependence between activity coefficients and the composition of the liquid phase. Sbor.Chekhh.khim.rab. 19 no.1:16-23 P '54. (MLRA 7:6)

1. Kafedra fizicheskoy khimii, Prazhskogo Khimicheskogo Instituta.  
(Phase rule and equilibrium) (Activity coefficients)

VILIM, OTAKAR

Chemical Abst.  
Vol. 48 No. 8  
Apr. 25, 1954  
General and Physical Chemistry

Liquid-vapor equilibrium. III. Thermodynamics of  
nonelectrolyte solutions. Eduard Hala, Otakar Vilim,  
Jiří Pick, and Vojtěch Fried (Vysoká škola chem., Prague,  
Czech.). Chem. Listy 47, 1101-12 (1953); cf. *ibid.*  
841.—A review with math. considerations and 30 refer-  
ences.  
M. Hudlický

8  
5  
10/10/57

Z/037/62/000/005-6/028/049  
E140/E562

AUTHORS: Jedlicka, M. and Vilim, P.

TITLE: The photocathode [Te-Cs, Sb-Na] and [Te-Cs, Sb-Na-K]

PERIODICAL: Československý časopis pro fysiku, no. 5-6, 1962,  
617-619

TEXT: Describes the manufacture of these photocathodes.  
Sensitivity, spectral characteristics and quantum efficiency were  
measured. Peak spectral sensitivities were in the neighbourhoods  
of 300-400 nm, and the quantum efficiencies of the order of  
0.3-0.5. There are 4 figures.

ASSOCIATION: Výzkumný ústav vakuové elektrotechniky, Praha  
(Research Institute for Vacuum Engineering, Prague)

Card 1/1

ACC NR: AP6033257

in the measurements and for the translation of the text, and to Kalinovaya for the calculations and analysis of measurement results. Orig. art. has: 9 figures and 2 formulas.

SUB CODE: 09, 20/ SUBM DATE: 28Oct65/ ORIG REF: 002/ OTH REF: 005/  
SOV REF: 002/

Card 2/2

VICLÍK, Boettikáš; STUBELÝ, Jiřínek

Regulation of the molecular mass of polypropylene with hydrogen.  
Chem pram 12 no.8:419-422 pg 162.

I. Research Institute of Macromolecular Chemistry, Brno.

VILIM, R.

Pressureless copolymerization of ethylene with propylene. p. 101

CHEMICKE PRUMYSTI. (Ministerstvo chemickeho prumyslu) Praha, Czechoslovakia  
Vol. 9, No. 2, Feb. 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 7, July 1959  
Uncl.

PAGE 1 NOT WITHHELD

International symposium on macromolecular chemistry. Novosibirsk, 1980. Sov. J. Macromol. Sci., v. 12, no. 1-2, 1980.

1960 Et' godil'j i sverotnost'. Sotsiya II. [International Symposium on Macromolecular Chemistry, Held in Moscow, June 18-19, 1959. Paper and Summaries on Macromolecular Chemistry] (Moscow, Issled. po SSSR, 1960) 559 p., 5,500 copies printed.

**INTRODUCTION:** This book is intended for chemists interested in polymerisation reactions and the synthesis of high-molecular compounds.

**OUTLINE:** This is Section II of a multi-volume work containing papers on macromolecular polymer chemistry. The papers in this volume treat mainly the kinetics of radiation polymerization reactions initiated by different catalysts or induced by radiation; the research techniques discussed are electron paramagnetic resonance spectroscopy and light-scattering. The electron paramagnetic resonance spectra of  $\text{Fe}^{2+}$  in  $\text{BaSO}_4$ ,  $\text{Fe}^{2+}$  in  $\text{BaSO}_4$ , and  $\text{Fe}^{2+}$  in  $\text{BaSO}_4$  are discussed. There are some failed attempts mentioned. References.

K. Ito and J. Sernocik (Rumania). On the Mechanism of the Formation Reaction of Stereoregular Polymers

On the Kinetics of a Reaction on  
Gel Catalysts

Stejsle, O., M. Marsh, and I. Trchová (Czechoslovakia). Polymerization of Zadutylane on a Heterogeneous Catalyst

J. V. (Czechoslovakia). Heterogeneous Catalysts for the Polymerization of  
Aliphatic Olefins

Y. K., I. Aihara, I. Yajin, and O. Hattori (see references). The effect on Dower-type lipofuscin on the Polymerization of Propylene. Influenced by the System Titanium Trichloride-tetraethyl-

Applon, R.A. (1959). Study of the Factors Leading to the Determination of Chain Structure During the Ionic Polymerisation of Dienes. *J. Polym. Sci.*, 357

Shestopal, N.D., Wang Po-sung, and A.P. Karushenko ( USSR ). Study of the action of Organomagnesium Compounds with Salts of Heavy Metals and the Action of Organomagnesium Compounds and their Derivatives.

**I.** and **II.** and **III.** (unpublished). The Effect of Organic Ioner Compounds on Variable Valence on the X-ray Diffraction Pattern of  $\text{Li}_2\text{SiO}_4$ . Part I. The Effect of  $\text{Li}^+$  and  $\text{Cs}^+$  on the Structure of  $\text{Li}_2\text{SiO}_4$ .

J. F. S. Yeo, N. J. Maceratisky, J. Ya. Podol'skaya, and G. V. Tsvetkov, *J. Polym. Sci. Part A: Polym. Chem.*, **36**, 3665 (1998).

**572**  
J. Polym. Sci., Vol. 1, No. 1, Jan. 1947  
Study of Some Details of the Mechanism of Polymerization Under  
Controlled Redoxity, and Skill Hand-1  
and 2, Part I. Preparation and Properties of Complex Catalysts  
for the Polymerization of Acrylonitrile  
by J. M. GOLDBECK, R. H. BURTON, AND W. C. MCLELLAN  
Polymer Department, Research Triangle Institute, Research Triangle Park,  
North Carolina 27709

specificity and the Optical Properties of Polymers (USSR).  
T.M. T.M. Yu. Ya. Ovchinnikov and O. G. Ptitsyn (transl.)

The applicability of polymers and methods of study  
A.I.P., A.P., P.G. Shenderov, M.K. Tsvetkov, and I.P. Kostyuk.  
Addition and Carbene Polymerization.

**I. A. and V. A. Kabanov (USSR).** Polymerization Processes in the Radiation Field. Mechanisms Under the Effects of Molecular Dispersions. 410

L. I. Melikh and I. N. Sazanov (Czechoslovakia). Kinetics of the action of Formaldehyde

(Czechoslovakia). On the Mechanism of Iodine Polymerization  
and A. Kanda (Kyoto University),  
S. Saito (Kyoto University),  
and A. Kondo (Kyoto University).  
263

45  
in the Cationic Polymerisation of Isodicytylene

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APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7"

VILIM, R.

Silon net in the treatment of burns. Rozhl. chir. 42 no.4:  
252-255 Ap '63.

1. Chirurgicke oddeleni ZUNZ SONP v Kladne, vedouci MUDr.  
J. Vrbsky.

(BURNS) (POLYMERS) (BANDAGES)

S/081/62/000/024/027/052  
B117/B186

## AUTHORS:

Vilím, Rostislav, Ambrož, Jaroslav, Hamšík, Oldřich

## TITLE:

Production of poly- $\alpha$ -olefins with an increased content of crystalline fraction at higher polymerization rate and with the possibility of using low-purity raw material

## PERIODICAL:

Referativnyj zhurnal. Khimiya, no. 24 (II), 1962, 896,  
abstract 24P577 (Pat. ČSSR 99922, June 15, 1961)

TEXT: A mixture of  $TiCl_4$  (I) -  $Al(C_2H_5)_3$  (II) activated with small amounts of substances containing nitrogen or oxygen capable of forming onium compounds on the surface of the solid phase of catalyst, is used as polymerization catalyst. Such catalysts increase the reaction rate considerably and reduce the required amount of catalyst; hence the reaction can be conducted at a considerable concentration of catalytic poisons in the reaction medium. 2.4 g of a polymer, with a viscosity number of 490 and a 97 % crystalline fraction, was obtained from a mixture of 27 ml n-heptane, 4000 mg propylene, 30 mg (I), 230 mg (II), and 4 mg phenyl hydrazine after 60 min at 50°C. Without (III), only 1.3 g of poly-  
Card 1/2

Production of poly- $\alpha$ -olefins with ...

S/081/62/000/024/027/052  
B117/B186

mer (viscosity number 430 and 90 % crystalline fraction) was obtained under equal conditions. Diethyl ether and benzimidazol were also used as activating substances. When 1.5 mg CS<sub>2</sub> was added to the mixture, polymerization without activator did not occur even after 3 hrs. An addition of 9.8 mg (III) yielded 1.95 g of the polymer, (viscosity number 256 and 93 % crystalline fraction) after 2 hrs. [Abstracter's note: Complete translation.]

Card 2/2

VILIM, Rostislav

Control of molecular weight of polypropylene by means of carriers.  
Chem prum 12 no.2:102-106 F '62.

1. Vyzkumný ustav makromolekulární chemie, Brno.

VANEK, J.; LUKES, J.; POTUZNIK, V.; POLEDNIKOVA, I.; VILIM, V.

Myocarditis and encephalitis in newborn infants, caused by coxsackie B virus. J. Hyg. Epidem., Praha 3 no.3:283-291 1959

I. Sikl's Department of Pathology and Children's Clinic of the  
Medical Faculty, Charles University, Plzen, Department of Virology of  
the Regional Hygiene and Epidemiology Station, Ceske Budejovice,  
Anti-epidemic Department of the Regional Hygiene and Epidemiology  
Station, Plzen.

(MYOCARDITIS, in inf. & child)  
(ENCEPHALITIS, in inf. & child)  
(INFANT NEWBORN, dis)  
(COXSACKIE VIRUSES, infect)

VILIM, Vladimir, Dr.; SVEC, Jaroslav, PhMr.

Detection of *Salmonella typhi abdominalis* with the aid of Seitz filter  
using ~~EE~~ in epidemics. Cesk. epidem. mikrob. imm. 6 no.5:349-350  
Sept 57.

1. Krajska hygienickoepidemiologicka stanice v Plzni, reditel Dr Vl.  
Stastny.

(*SA*LMONELLA TYPHOA,  
detection with Seitz filter (Cz))

JINDRA, Jaroslav; VILIM, Vladimir. Technicka spoluprace: LOBKOWICZHOVA,  
Marie

Contribution to the problem of inoculated virus hepatitis. Plzen.  
lek. sborn. 24:51-60 '64

1. Klinika nemocí infekčních lekarské fakulty University Karlovy  
v Plzni (prednosta: doc. MUDr. V. Palisa, CSc.) a Krajska  
hygienicko-epidemiologicka stanice v Plzni (reditel: MUDr.  
R. Miksl).

VILIM, Vladimir, inz.

Effect of radidation heating on asphalt insulation. Poz stavby  
11 no.7:381-387 '63.

1. Krajsky projektovy ustav Brno.

VILIM, Vladimir, MUDr.; ZBORKI, Jan, MUDr.

Epidemic of gastroenteritis caused by *Salmonella brandenburg*.  
Cesk. epidem. mikrob. izm. 6 no.1:67-69 Jan 57.

1. Krajska hyg. epid. stanice v Plzni, reditel MUDr. V. Staastny  
Infekcni oddeleni KUMZ v Plzni, prednosta MUDr. Jar. Zdaril.  
V. V. Klostermanova 12, Plzen.

(GASTROENTERITIS, etiol. & pathogen.  
*Salmonella brandenburg* (Cs))

(SALMONELLA INFECTIONS

gastroenteritis, caused by *S. brandenburg* (Cs))

DVORAK, V.; VILNEK, I.; VAMRAZIL, V.

Some data on the clinical picture of fat embolism. Acta chir.  
orthop. traum. Czech. 31 no.3:258-263 Je '64.

1. Interni oddeleni (vedouci MUDr. A. Süss) a ortopedicke  
oddeleni (vedouci MUDr. J. Horák Obvodniho ustavu narodniho  
zdravi v Piseku.

VILIMEK, Jiri

Mechanization of intermediate stores in machine tool factories.  
Stroj vyr 11 no. 3:140-142 Mr '63.

1. Zavodni pobocka Ceskoslovenske vedecko-technicke spolecnosti,  
Zavody presneho strojirenstvi, n.p., Gottwaldov.

CZECHOSLOVAKIA

VOJTISEK, O.; HAVELKA, S.; VILIMEK, P.; Research Institute for Rheumatic Diseases (Vyzkumny Ustav Chorob Revmatickych), Prague, Director (Reditel) Prof Dr F. LENOCH.

"Inclusions in Leucocytes in Urine of Patients Suffering from Rheumatoid Arthritis."

Prague, Casopis Lekaru Ceskych, Vol 105, No 22, 3 Jun 66, pp 601 - 602

Abstract [Authors' English summary modified]: Leucocytes from the urine of patients suffering from rhoumatoid arthritis contain granular inclusions closely resembling inclusions in leucocytes in the synovial fluid (so-called R.A. cells), in patients of all ages. As the leucocytes in urine come from the blood, the inclusions are identical with granules described in leucocytes of patients suffering from rheumatoid arthritis. 1 Figure, 5 Western, 1 Czech reference.

VILIMKOVA, Vera; NEDVIDEK, J.

Changes in DNA content during early embryonic development of  
Xenopus laevis (Daudin) and Rana temporaria (L.). Folia biol.  
8 no.6:381-389 '62.

1. Department of Experimental Zoology, Faculty of Science, Charles  
University, Prague.

(DNA) (EMBRYO)

VILIMOVSKY, Zdenek

CZECHOSLOVAKIA

Prague

Brno, Veterinarstvi, No 12, December 1966, pp 566-567

"Modern veterinary hospital in Zurich."

VILMOSY, L.

VILMOSY, L. Organizational problems of the Power Plant in Tiszaalgyar concerning putting it into operation. p. 1.

Vol. 10, no. 7, July 1956

ED. MOLDOVAGYI

Budapest, Hungary

See: East European Review, Vol. 4, No. 5, May 1957

VILIMSZKY, Zoltan

"Vertebrates living in the soil" by Istvan Vasarhelyi.  
Reviewed by Zoltan Vilimszky. Borsod szemle 5 no.4:  
462 '61.

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7

VILIN, A.

Shakhtersk. Mast.ugl. 3 no.8:30 Ag '54. (MLRA 7:9)  
(Shakhtersk)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7"

BYCHENKOV, Yury Dmitriyevich, mladshiy nauchnyy sotrudnik; SEREGIN, I.N..  
Prinimali uchastiye: KOLOMENSKIY, A.P., inzh.; STOYAROV, M.P.,  
inzh.; VILIN, N.G., inzh.; VALYUS, V.M., inzh.; BOCHMAN, G.P.,  
tekhnik. YERIN, B.G., red.; SERGEYEV, A.F., red.izd-va; DONSAYA,  
G.D., tekhn.red.

[Investigating the performance of stretching equipment and cone-type anchorages] Issledovanie raboty natiashnogo oborudovaniia i komusnykh ankerov. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1959. 27 p.

(MIRA 13:4)

1. Nachal'nik laboratorii zhelezobetonnykh konstruktsiy Gosudarstvennogo Vsesoyuznogo dorozhnogo nauchno-issledovatel'skogo instituta (SOYUZDORNII) (for Seregin).

(Prestressed concrete)

VILIMSZKY, Zoltan,; MAGYAR, Eva, dr.

Endemic occurrence of strongyloidosis in the Borsod county.  
Orv.hetil. 101 no.28:990-992 10 J1 '60.

1. Borsod-Abauj-Zemplen megyei Kozegeszsegugyi Jarvanyugyi  
Allomas  
(STRONGYLOIDIASIS epidemiol)

VILINBAKHOV, B.

Coins have the floor. Znan.-sila 37 no.7:54 Jl '62.  
(MIRA 15:9)  
(Numismatics)

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7

VILINBAKHOV, B.

Ex libris. IUn.tekh. 6 no.1:49 Ja '62.  
(Books--Owner's marks)

(MIRA 15:2)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7"

VILINBAKHOV, V.B.; KHOLMOVSKAYA, T.N.

"Firearms" of medieval China. Iz ist. nauki i tekhn. v stran. Vost.  
no.1:64-74 '60. (MIRA 14:8)  
(China--Firearms)

VILINBAKHOVA, V.N.

Specialization and consolidation of pharmacies, Apt. 3410/13  
no.4:11-17 Jl-Ag '64. (MIFPA 1A/3)

I. Leningradskiy khimiko-farmatsevticheskiy institut.

WILINBACHOW, Wadim [Vilinbachov, Vadim] (Leningrad); NCWAK, Tadeusz [translator]

Initial period of development of the use of firearms in  
Slavic countries. Kwart hist nauki i tech 8 no.2:215-235  
'63.

1. Instytut Historii Przyrodoznawstwa i Techniki, Akademia  
Nauk Z.S.R.R. (for Wilinbachow).

EVENTOV, Arkadiy Markovich; VILINSKAYA, I.G., red.; NIKOLAYEVA, Ye.F.,  
tekhn. red.

[The Zabotins]Suprugi Zabotiny. Moskva, Izd-vo "Sovetskaja  
Rossija," 1962. 235 p. (MIRA 15:11)  
(Zabotin family) (Shuya District—Dairying)  
(Milking machines)

*a* L 27862-66 EWT(d)/EWT(l)/EWP(m)/EWP(w)/EPF(n)-2/EWF(v)/T-2/EWF(t)/EWF(k)/  
ACC NR: AP5028531 EWP(b)/EWA(h)/ETC(m) SOURCE CODE: UR/0286/65/000/020/0125/0125  
IJP(c) JD/WW/JG/EM/DJ

AUTHORS: Ukrainets, B. N.; Vilnitis, A. Ya.; Sirotenko, V. G.; Foliforov, V. M.

ORG: none

TITLE: Electromagnetic induction pump. Class 59, No. 175825 [announced by Central Project-Construction Bureau of Mechanization and Automation of the Council of National Economy of the Latvian SSR (Tsentral'noye proyektno-konstruktorskoye byuro mekhanizatsii i avtomatizatsii sovnarkhoza Latviyskoy SSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 125

TOPIC TAGS: electromagnetic pump, liquid metal pump, magnetic circuit, electrode, liquid metal

ABSTRACT: This Author Certificate presents an electromagnetic induction pump containing a magnetic circuit, an inductor with coils, and electrodes located in slots in the body which has a passage for the pumped fluid (see Fig. 1). To increase its operating temperature range, the pumped liquid metal is used as the inductor winding material. This metal fills the inductor and electrode slots

Card 1/2

UDC: 621.689

L 27862-66

ACC NR: AP5028531

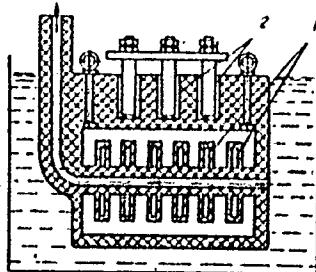


Fig. 1. 1 - Inductor  
slots; 2 - slots in  
body.

and comes from the pumping channel. Orig. art. has 1 figure.

SUB CODE: 09/

SUBM DATE: 14Oct64

Card 2/2 10

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7

VILIPPOV, V.V.

Climatic regionalization of the Sea of Japan. Trudy NIIAK  
no.20:76-87 '63. (MIRA 16:12)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7"

AL'PEROVICH, P.M.; VILISHER, M.V.

Etiology and pathogenesis, clinical aspects and treatment of spinal leptopachymeningitis, developing as a late sequel to tuberculous meningitis. Zhur.nevr.i psikh. 62 no.7:1006-1011 '62. (MIRA 15:9)

1. Klinika nervnykh bolezney (zav. - prof. P.M.Al'perovich)  
Vinitskogo meditsinskogo instituta i Vinnitskiy oblastnoy protivo-  
tuberkuleznyy dispanser (glavnyy vrach O.Z.Goretskaya).  
(MENINGES--TUBERCULOSIS) (MENINGITIS, SPINAL)

L 00743-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/GS

UR/0000/64/000/000/0238/0253

ACCESSION NR: AT5020470

AUTHOR: Vyatkin, A. P.; Vilisov, A. A.

41  
B1

TITLE: Gallium arsenide point-contact diodes

SOURCE: Mezhdunarodnaya nauchno-tehnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 238-253

TOPIC TAGS: semiconductor diode, gallium arsenide, semiconductor research, tunnel diode

ABSTRACT: The authors give a brief survey of previous literature on the general and rectifying properties of a gallium arsenide-metal point contact. Data are given on the processes of electrical forming applicable to manufacture of rectifiers and tunnel diodes. Results are given for quantitative calculations of electrical forming of a gallium arsenide-metal point contact. The calculations are made for two cases: 1) for the case of spherical symmetry assuming that the point contact has no size, i. e. the contact is represented as a mathematical point; 2) for the case of ellipsoidal symmetry, taking the actual dimensions of the contact between metal

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ACCESSION NR: AT5020470

and semiconductor into account. In this case, the contact is represented as a circle, and the radius appears in the calculations. It was found that *n*-gallium arsenide gives point-contact diodes with good rectifying properties and high thermal stability. The current-voltage characteristics of the diodes are given by the relationship

$$I = I_0 \left( e^{\frac{qV}{kT}} - 1 \right)$$

During electrical forming, the current passing through the contact between metal and *n*-gallium arsenide heats the area of the semiconductor near the contact and converts it to a *p*-region. Rectification in the diodes after forming takes place at the *n-p* junction. The quantitative calculations of electrical forming may be used for approximate prediction of some of the characteristics of the diode after forming. Where experimental agreement is good, the results of these calculations may serve as a guide for manufacturing point-contact diodes with predetermined characteristics. It is shown that electrical forming may be successfully used for manufacturing tunnel diodes based on gallium arsenide. Orig. art. has: 10 figures, 5 formulas.

ASSOCIATION: none

SUBMITTED: 06Oct64

NO REF Sov: 011

Card 2/2 *OP*

ENCL: 00

OTHER: 009

SUB CODE: EC

L 12820-63

EWP(q)/EWT(m)/BDS...AFFTC/ASD JD

ACCESSION NR: AT3003016

S/2927/62/000/000/0259/0266

AUTHOR: Presnov, V. A.; Vyatkin, A. P.; Novotny'y, S. I.; Khludkov, S. S.;  
Vilisov, A. A.

62  
58

TITLE: Investigation of rectifying properties of gallium arsenide [Report at the  
All-Union Conference on Semiconductor Devices, Tashkent, 2-7 October, 1961]

SOURCE: Elektronno-dy\*rochny\*ye perekhody\* v poluprovodnikakh. Tashkent, Izd-vo  
AN UzSSR, 1962, 259-266

TOPIC TAGS: GaAs rectifier

ABSTRACT: The work is a continuation of research in point-contact diodes and diffusion junctions in p-type GaAs (Presnov, V. A., et al. Reports at the 3-nd Vuz Conference on Modern Dielectrics and Semiconductors, Leningrad, 1960). GaAs was prepared with resistivities from a few  $10^{-4}$  to  $10^{-1}$  ohm.cm. Only n-GaAs exhibited good rectifying properties: diodes with 0.005-0.01 ohm.cm resistivity and  $10^{17} - 10^{18}$  cm<sup>-3</sup> electron concentration showed a good rectification factor, large forward currents, low cutoff voltages, and reverse voltages of 5-10 v. Higher-resistivity diodes showed a higher reverse voltage, a smaller forward current, and

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ACCESSION NR: AT3003016

4

a high cutoff voltage. Current-voltage characteristics were measured within 20-350C. Effect of strong electric fields on GaAs ohmic point contacts was measured with 20-microsec pulses at 250 cps; it was found that the strong field produces carriers by ionizing impurity centers. Also effect of forming on the current-voltage characteristics was measured. A separate investigation was made of diffusion p-n junctions of p-GaAs; current-voltage characteristics of junctions obtained by diffusion of Ge, Se, and S were measured. "The authors express their deep gratitude to A. P. Izergin who prepared GaAs and to B. A. Selivanov, A. M. Palkin, and P. I. Zakharov for their help in the work." Orig. art. has: 9 figures and 2 formulas

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 15May63

ENCL: 00

SUB CODE: PH

NO REF SOV: 009

OTHER: 006

Card 2/2

I 45910-66 ENT(m)/EMP(t)/ETI IJP(c) JD  
ACC NR: AR6015975 SOURCE CODE: UR/0275/65/000/011/B035/B035

50  
B

AUTHOR: Vilisov, A. A.; Vyatkin, A. P.

TITLE: Thermal forming of gallium arsenide point diodes

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 11B275

REF SOURCE: Dokl. Nauchno-tekh. konferentsii, posvyashch. dnyu radio. Tomsk, Tomskiy un-t, 1964, 29-32

TOPIC TAGS: semiconductor diode, gallium arsenide, PN junction

ABSTRACT: Contact forming was done by passing a current through a nichrome wire welded to an electrode at a distance of 1-1.5 mm from the tip. The thermoelectromotive force was measured during forming. A change in the sign of the thermoelectromotive force is observed during rather intense forming which indicates formation of a PN junction. The processes observed during thermal forming show characteristics similar to those observed for the case of electrical forming. However, a value of  $40 \text{ v}^{-1}$  has been achieved with thermal forming for  $\alpha$  (in the expression  $I=I_0 \exp(\alpha U)$ ) which has not been possible with electrical forming. Bibliography of 8 titles. L. L.  
[Translation of abstract]

SUB CODE: 09

Card 1/1 mjs

UDC: 621.382.2.002;546.19'681

NERONSKIY, O.G.; VILISOV, B.A.

Current status and tasks of industrial hygiene supervision in  
the White Russian S.S.R. Zdrav.Bel. no.3:47-49 '62.

(MIRA 15:5)

1. Kafedra gigiyeny Minskogo meditsinskogo instituta (zavedu-  
yushchiy - professor Z.K. Mogilevchik) (for Neronkiy). 2. Gosu-  
darstvennyy sanitarnyy inspektor Minzdrava BSSR (for Vilisov).  
(WHITE RUSSIA—INDUSTRIAL HYGIENE)

VILISOVA, I.K.

OTRSYL, No. 45

Vilisova, I.K. (Baikal Limnological Station, U.S.S.R. Academy of Sciences), The feeding of  
the Baikal *Tremoctopus branickii* Dub., 329-31

Akademiya Nauk, S.S.R., Doklady, vol. 79, no. 2, 1951

VILISOVA, I.K.

Zooplankton of the Maloye More. Trudy Baik.limnol.sta. 17:  
275-304 '59. (MIRA 12:12)  
(Maloye More--Zooplankton)

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7

VILISOVA, I.K.

Studying the micronectobenthos of the Maloye More. Trudy  
Baik.limnol.sta. 17:305-312 '59. (MIRA 12:12)  
(Maloye More--Fresh--Water fauna)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7"

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7

BAZIKALOVA, A.Ya.; VILISOVA, I.K.

Nutrition of bottom-feeding fishes in the Maloye More.  
Trudy Baik.limnol.sta. 17:382-497 '59. (MIRA 12:12)  
(Maloye More--Fishes--Food)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7"

VILISOVA, I.K.

Ecology of the Baikal pelagic amphipod *Macrhectopus  
branickii* Dyb. Trudy Lim. inst. 2 pt. 1:156-171 '62.  
(MIRA 16:8)

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7

VILESOVA, I.S.; NAMESTNIKOV, V.S. (Novosibirsk)

A hardening parameter. RMTF no. 3:177-179 My-Je '64.  
(MIRA 17:6)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820001-7"

Films of gallium arsenide and their properties. V. A. Presnov,  
L. G. Lavrent'yeva, M. D. Vilisova, I. K. Kovalev.

On the physico-chemical nature of the formation of contacts of gallium  
arsenide with metals. V. A. Presnov, A. N. Vyatkin.  
(Presented by A. N. Vyatkin--10 minutes).

Report presented at the 3rd National Conference on Semiconductor Compounds,  
Kishinev, 16-21 Sept 1963

L 3368-66 EWT(1)/T IJP(c) GG/GS

ACCESSION NR: AT5020489

UR/0000/64/000/000/0422/0431

AUTHORS: Vilisova, M. D.; Lavrent'yeva, L. G.; Murashko, V. S.; Presnov, V. A.  
(Professor) *44,55* *44,55* *44,55*

TITLE: Producing and studying gallium arsenide films *27 27 44,55,11*

58  
B+1

SOURCE: Mezhvuzovskaya nauchno-tehnicheskaya konferentsiya po fizike  
poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya. Tomsk, 1962.

Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact  
phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 422-431 *44,55*

TOPIC TAGS: gallium arsenide, iodine, cadmium sulfide, selenium, microelectronic  
thin film *44,55*

ABSTRACT: Methods of producing gallium arsenide films, their electrical conductivity, grain size, charge-carrier concentration, and thermo-emf coefficient, and the results of tests of the films for uniformity of thickness and resistance are discussed. The work was done to develop methods of producing thin homogeneous gallium arsenide films of stoichiometric composition, and the tests were performed to evaluate the various methods. Gallium arsenide films were prepared by vaporization in a vacuum (vaporization temperature, ~ 1000°C, substrate temperature,

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ACCESSION NR: AT5020489

400-450°C, layer thickness,  $\sim 3-4\mu$ ; by thermal sublimation (source temperature, 1000-1100°C, substrate temperature, 700-800°C, growth rate,  $0.5-3\mu/\text{hr}$ ); and by the iodide method, where an evacuated quartz ampule containing GaAs, iodine, and a substrate is heated in a furnace (source temperature, 100-200°C higher than substrate temperature; substrate temperature  $\geq 600^\circ\text{C}$ ; growth rate,  $50-100\ \mu/\text{hr}$ ). The average size of the crystals in the films produced by distillation and the iodide method was  $4-5\mu$ . Typical curves of the conductivity  $\sigma$ , Hall coefficient  $R$ , and thermo-emf coefficient  $\alpha$  versus temperature for certain polycrystalline films are given in Fig. 1 on the Enclosure. It is shown that the sublimation and iodide methods produce polycrystalline and epitaxial GaAs films that are fairly uniform in thickness and resistance. Both methods also allow doping with Zn, Cd, and Se. Orig. art. has: 10 graphs, 1 diagram, 2 tables, and 1 formula.

ASSOCIATION: [none] (no organization found)

SUBMITTED: 06Oct64

ENCL: 01

SUB CODE: SS

NO REF Sov: 004

OTHER: 002

Card 2/3

L 3368-66

ACCESSION NR: AF5020489

ENCLOSURE: 01

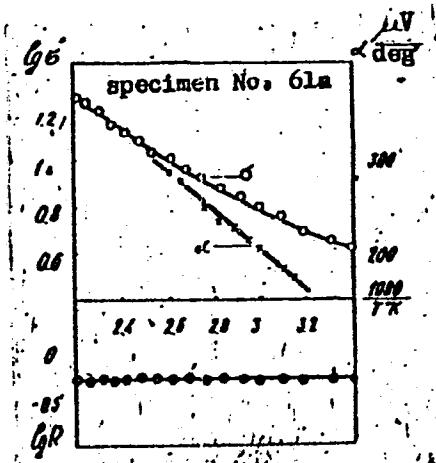


Fig. 1. Curves of conductivity, Hall coefficient, and thermo-emf coefficient versus temperature for polycrystalline specimen

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